

DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000136**Date Inspected:** 26-Apr-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 800**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1730**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Huang Wei**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** N/A**Summary of Items Observed:**

The CALTRANS Quality Assurance (QA) Inspector, Alfredo Acuna was present for the welding qualification testing pertinent for the welding qualification record (PQR) HP200787 scheduled for this project. ZPMC, welding operator Jiang Xiao Hu was observed by the QA Inspector performing welding operations following the preliminary welding procedure specification PWPS-B-T-2221-FB-2 for the PQR identified as HP200787. Base metal was designated as A-709-50F-2 (Heat # 7200621N) and appeared to meet the fracture critical requirements. The root opening of the joint was approximately 16 mm. ZPMC followed AWS 5.12.2 Maximum Heat Input procedure WPS using the automatic submerged arc welding (SAW) process in the flat (1G) position with the 4.8 mm diameter EH14 electrode with the S-737 flux. The QA Inspector verified amperages, voltages, travel speeds, preheat and heat interpass temperatures. The QA inspectors recorded welding parameters for a total of 14 passes. The QA inspectors observed that the welding parameters taken by ZPMC QA inspector Huang Wei appeared to be accurate and in accordance with the contract documents.

The QA inspector performed final visual examination to the test coupon after completion of the PQR-HP200787. The QA inspector observed that welds appeared to be in general compliance with the contract documents. The QA inspector assigned a lot # B71-021-07 on this date. The digital photograph below shows the PQR test coupon after completion.

For more information see TL_6032 generated on this date.

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Summary of Conversations:

After the completion of the test coupon, the QA inspector relayed to ABF representative Song Wemin that the weld at the left end of the test coupon had approximately 0.5 mm by 50 mm underfill and the rest of the weld had a maximum weld reinforcement of approximately 3 mm. The QA inspector recommended Mr. Song to grind even the weld reinforcement according with AWS D1.5 2002 section 5.26.1.1 for radiographic testing purpose. After consulting with ZPMC representatives, Mr. Song relayed to the QA inspector that if the radiograph film shows obscure areas that limited the interpretation, ZPMC would reject the test coupon PQR-HP200787.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Acuna, Alfredo	Quality Assurance Inspector
Reviewed By:	McClary, David	QA Reviewer
